Claims:

Cancel Claims 1-21

Claim 22 (New) A method for implementing a first business process for a state dependent business to business protocol defined for integration to business systems of record including Enterprise Resource Planning systems, warehouse systems, or fulfillment systems;

comprising:

a user;

a business to business protocol including:

> definition for message transmission over a business to business network, including the internet;
>
> definition of the first business process including:
>
> a first state, a second state, and a state transition for the first business process from the first state to the second state with entry of a first entered data, including a response;
>
> an inbound message format for the first state including display data; and
>
> an outbound message format for the second state including entered data;

where the method comprises:

defining a Protocol processor including:

> receiving and transmitting messages supporting the business to business protocol and connected by a business to business network to a second processor implementing the business to business protocol;
>
> storing display data and entered data;
>
> a state machine providing:
>
>> state of the first business process;
>>
>> receiving an inbound message including display data when in the first state;
>>
>> displaying the display data from an inbound message to the user, the display including a web page;
>>
>> accepting an entered data input from the user, the means of entry

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including a web page;

changing the state from the first state to the second state based on the defined state transition; and

sending an outbound message with the entered data;

such that the inbound message is received, the user views the display data and enters the entered data, and the outbound message is sent, so that the user transacts the first business process for the business to business protocol with the second processor.

Claim 23 (New) The method of Claim 22 including a business system which provides user data entry and displays response data to the user in response to the data entry where the method is extended to include:

the user entering the displayed data from the Protocol processor into the business system;

the business system displaying response data; and

the user entering the response data from the business system into the Protocol processor as the first entered data;

such that the business system and Protocol processor have the same display data, entered data, and state.

Claim 24 (New) The method of Claim 22 including a business system, connected by a message network to the Protocol processor, which provides user data entry and transmits a response data message including response data as response to the entered data where the method is extended to include:

extending the Protocol processor to accept response data in a transmitted response data message as first entered data;

the user entering the displayed data from the Protocol processor into the business system; and

the Protocol processor accepting the response data in the response data message from the business system as the first entered data;

such that the business system and the Protocol processor have the same display data, entered data, and state; and the business system response to the Protocol process is automated.

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Claim 25 (New) The method of Claim 22 including a business system, connected
by a message network to the Protocol means, which accepts a data entry
message and displays response data to the user as response to the data entry
message where the method is extended to include:

extending the Protocol processor:

to store entered filter data and rules;

to determine from the display data using filter data and rules, a
good message; and

to transmit the display data for a good message in a data entry
message from the Protocol processor to the business system;

the business system receiving data entry message; and

the user entering the response data from the business system into the
Protocol processor as the first entered data

such that for good messages, the business system and Protocol processor have
the same display data, entered data, and state; and the business system data
entry for good message from the Protocol processors is automated.

Claim 26 (New) The method of Claim 22 including a business system, connected
by a message network to the Protocol means, which accepts a data entry
message and transmits a response data message including response data as
response to the data entry message where the method is extended to include:

extending the Protocol processor

to store entered filter data and rules;

to determine from the display data using filter data and rules, a
good message; and

to transmit the display data of the good message in a data entry
message from the Protocol processor to the business system;

to accept first data in a transmitted response data message from
the business system as the first entered data;

such that the business system and Protocol processor have the same display
data, entered data, and state for good messages; and the business system data
entry for a good message from the Protocol processor and the business system

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response to the Protocol processor are automated.

Claim 27 (New) The method of Claim 22 is further extended to include:

defining the change to display and entry data for the first business process;

extending the Protocol processor to change the stored display and entry data based on the definition for the first business process such that the display and entry data stored in the Protocol processor are consistent with the display and entry data for the first business process.

Claim 28 (New) The method of Claim 22 including a second business process where the business to business protocol further defines:

    the second business process:

    a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

    an inbound message for the third state; and

    an outbound message for the fourth state;

where the method is further extended to include:

    defining the change of the display and entry data for the first process to display and entry data for the second business process;

    extending the Protocol processor to change the display and entry data for the first process to the display and entry data for the second process based on the definition of these changes;

so that display and entry data for the first business process are changed and used as display and entry data for the second business process.

Claim 29 (New) The method of Claim 22 including a second business process where the business to business protocol further defines:

    the second business process:

    a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

    an inbound message for the third state;

    an outbound message for the fourth state; and

    the inter-process relationship such that at the completion of the first business process the second business process is initiated

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where the method is further extended to include:

modifying the Protocol processor to initiate the second process at the completion of the first process;

so that the first business process completes and the second business process is initiated.

Claim 30 (New) The method of Claim 22 where the first business process is further defined to include:

a fifth state,

a state transition for the first business process from the first state to the fifth state when fifth entered data are entered;

the Protocol processor further providing:

a state transition from the first state to the fifth state when fifth entered data are entered,

such that:

an inbound message is received while in the first state;

the displayed data are viewed:

fifth entered data are entered;

an outbound message including fifth entered data is transmitted; and

the state is change to the fifth state.

Claim 31 (New) A system to implement a business to business protocol that defines a state dependent business process comprising:

a user;

a first computer with a user interface, including a web page, connected to a business to business network, including the internet, and capable of receiving and transmitting messages with a second computer implementing the business to business protocol;

a business to business protocol including definition of:

a first state dependent business process:

a first state, a second state, and a state transition for the first business process from the first state to the second state with entry of first entered data, including a response;

an inbound message format for the first state including display data; and

an outbound message format for the second state including entered data;

a Protocol program executing in the computer providing:

means to maintain the state of the first business process;

means to receive an inbound message while in the first state;

means to display the display data in the message to the user;

means to accept entry of entered data by the user;

means to store display data and entered data;

means to change the first state to the second state based on the defined state transition; and

means to transmit an outbound message with the entered data;

such that the inbound message is received, the user views the display data and enters the entered data, and the outbound message is sent to transact the first business process using the business to business protocol with the second computer.

Claim 32 (New) The system of Claim 31 including a business system which provides data entry and displays response data as response to the data entry where the system is extended to include:

the user entering into the business system the displayed data from the Protocol program; and

the user entering the response data from the business system into the Protocol program as the first enter data;

such that the business system and the Protocol program have the same data and state.

Claim 33 (New) The system of Claim 31 including a business system, connected by a message network to the system, where the business system accepts a data entry message, generates response data based on the data entry message and sends the response data in a response message;

wherein the Protocol program is extended to provide:

means to store entered filter data and rules;

means to determine from the display data using filter data and rules a good message; and

means to transmit the display data for a good message in a data entry message to the business system;

means to receive a response message from the business system and transform response data into first entered data;

such that for good messages the business system and Protocol program have the same display data, entered data, and state; and the business system data entry from the Protocol program and the business system response to the Protocol program are automated.

Claim 34 (New) The system of Claim 31 including a second state dependent business process where the business to business protocol further defines:

the second business process:

a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

an inbound message for the third state;

an outbound message for the fourth state; and

the inter-process relationship such that at the completion of the first process the second process is initiated

where the Protocol program is extended to initiate the second process at the completion of the first process;

such that the first business process completes and the second business process is initiated.

Claim 35 (New) A system for implementing a state dependent business to business protocol providing definition of state dependent processes each with state transitions and state dependent messages including data and responses; the system comprising;

a first computer connected by a network to a second computer implementing the state dependent business to business protocol;

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a program in the first computer providing:

means to store message data and responses;

means to store the state of a state dependent process;

means to display message data and accept message data entry,

including web pages;

means to receive a state dependent message;

means to change the state of the state dependent process based on the

state transition definition and entered message data;

means to send a state dependent message;

such that system provides storage for each message data, a process for each

message data including message data display and entry, and state transitions so

that the state dependent processes are implemented on the first computer to

transact the state dependent business to business protocol with the second

computer.

Claim 36 (New) The system of claim 35 wherein the state dependent business to

business protocol defines:

a first state dependent process,

a second state dependent process,

the transformation of message data for the first state dependent process

to message data for the second state dependent process, and

at the completion of the first state dependent process initiates the second

state dependent process; and

the program is extended so that the first state dependent process completes, the

message data for the first state dependent data are transformed to message data

for the second state dependent process, and the second state dependent

process is initiated.

Claim 37 (New) The system of claim 35 including a system of record, including

Enterprise Resource Planning system, warehouse system, or fulfillment system,

connected by a network to the first computer where the program is extended to

include:

means to store entered filter data and rules;

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means to determine from the message data using filter data and rules a good message;

means to send for a good message, a record message with message data to the system of record as input data based;

means to receive a record message with response data from the system of record in response to input data as message data;

such that for good messages, the system of record and the program have the same message data and state; and the system of record data entry from the program and the system of record response to the program are automated.

Claim 38 (New) The system of claim 35 wherein the first computer and second computer are the same computer.

Claim 39 (New) The system of claim 35 wherein the program provides a report of each active state dependent process, including current state, late orders, order changes; and history of active and completed state dependent processes including states, users, and data changes.

Claim 40 (New) The system of claim 35, wherein the program also executes on a third computer connected by the network to the first computer and second computer where the third computer provides global level state dependent processes, including internal integration of sites and external consistency, for the first computer that provides site level state dependent processes such that all first computer state dependent processes with the second computer pass through the third computer.

Claim 41 (New) The system of claim 35, wherein a fourth computer is connected by the network to the second computer and the program including:

message data and responses;

state of a state dependent process;

is transferred to the fourth computer such that the state dependent processes are transferred and implemented on the fourth computer.

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